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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/795,853	03/08/2004	Reinhard Engel	P2003,0162	3187
21495	7590	09/08/2005	EXAMINER	
CORNING CABLE SYSTEMS LLC			CHIEM, DINH D	
P O BOX 489			ART UNIT	
HICKORY, NC 28603			PAPER NUMBER	
			2883	
DATE MAILED: 09/08/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/795,853

Applicant(s)

ENGEL, REINHARD

Examiner

Erin D. Chiem

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 1-3, 4 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/12/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the preliminary amended application filed on March 8, 2004.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the slot element surrounding the optical waveguides as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: On page 6 of the Specification, symbol AH' has two definitions: 1) slot element and 2) core cladding. Furthermore, the Examiner objects to Applicant's interchangeably defining LW as "[optical] fiber" and "fiber bundle" and "bundle core." According to www.Corning.com, the two basic elements of optical fiber are its core and cladding. From the Specification as a whole, LW seems to be a bundle of cores and AH' seems to be the cladding. The citation on page 6 is only exemplary, appropriate correction throughout the Specification is required.

Claim Objections

3. Claims 1 and 7 are objected to because of the following informalities: An independent claim must have three basic components: 1) Preamble 2) Transitional phrase 3) Body or specific limitations. Claims 1 and 7 appear to lack the transitional phrase. Appropriate correction is required.

Claims 1 and 7 are objected for the recitation of *--forms several dry, compressible elements in its final state--*. The Specification does not disclose what filling compound was used and there is no basis for the claim of forming "several dry, compressible elements in its final state."

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 7 are rejected under 35 U.S.C. 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed. Evidence of concealment of the best mode is based upon the lack of disclosure on the specificity of the filling compound and the extruding process that will form an optical fiber with multiple cores wherein the refractive index of the core is higher than the refractive index of the cladding.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1, 3-4, and 7 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the cladding AH'.

Claim 6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation "and/or" is broad and narrow within the same claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-3, 7-8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bourget et al. (US 6,658,184 B2). Bourget teaches an optical transmission element 5 with several optical waveguides 2 and with a slot element (4, 6) surrounding the optical waveguides, which seals an interior space 1, the optical waveguides are subsequently fed into an extruder, where the extruder forms a slot element around the optical waveguides (col. 2, lines 34-35), where the filling compound expands within the formed slot element, penetrates interstices present in the interior on the cross-section level of the transmission element and forms several dry, compressible elements in its final state, which each surround the optical waveguides (col. 4, line 42-47).

Regarding claims 2 and 8, the hydrophobic gel 3 is silicones based.

Regarding the limitation wherein the filling compound is applied intermittently to the optical waveguides in liquid state, also in claim 10, it is understood in the art that when forming an optical transmission that is waterproof, the entire length of the fiber is proof with the filling compound. However, it is also understood that when the optical transmission element does not have high waterproof standard then the optical transmission element may be produced with the intermittent application of the filling compound to conserve material and lower costs.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bourget in view of Brandt et al. (US 5,393,536).

Bourget teaches an optical transmission element 5 with several optical waveguides 2 and with a slot element (4, 6) surrounding the optical waveguides, which seals an interior space 1, the optical waveguides are subsequently fed into an extruder, where the extruder forms a slot element around the optical waveguides (col. 2, lines 34-35), where the filling compound expands within the formed slot element, penetrates interstices present in the interior on the cross-section level of the transmission element and forms several dry, compressible elements in its final state, which each surround the optical waveguides (col. 4, line 42-47).

However, Bourget does not teach the filling compound within the formed slot element beginning to expand only after leaving the extruder, preferably only when the slot element is in a rigid state.

Brandt teaches using thermosetting resins such that after extrusion, the medium will hardens and become rigid (col. 4, lines 6-17). The cooling of the extruded material is dependent on the speed, temperature, and heat capacity of the resin and/or filler (col. 6, lines 5-30).

Since Bourget and Brandt are both from the same field of endeavor, the purpose disclosed by Brandt would have been recognized in the pertinent art of Bourget.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ the thermosetting material taught by Brandt as the extruding material and the filling compound to form a rigid optical transmission element. **The motivation** for extending the lifetime of the optical transmission element when exposed to condition such as the depth of the sea.

Conclusion


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See Notice of Reference Cited for the list of prior arts that in combination teaches the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin D. Chiem whose telephone number is (571) 272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erin D Chiem
Examiner
Art Unit 2883


Frank G. Font
Supervisory Primary Examiner
Technology Center 2800